

Outdoor and Environmental Studies

Victorian Certificate of Education Study Design

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Latoya BARTON
The sunset (detail)
from a series of twenty-four
9.0 x 9.0 cm each, oil on board



Tarkan ERTURK
Visage (detail)
201.0 x 170.0 cm
synthetic polymer paint, on cotton duck



Liana RASCHILLA
Teapot from the *Crazy Alice* set
19.0 x 22.0 x 22.0 cm
earthenware, clear glaze, lustres



Nigel BROWN
Untitled physics (detail)
90.0 x 440.0 x 70.0 cm
composition board, steel, loudspeakers,
CD player, amplifier, glass



Kate WOOLLEY
Sarah (detail)
76.0 x 101.5 cm, oil on canvas



Chris ELLIS
Tranquility (detail)
35.0 x 22.5 cm
gelatin silver photograph



Christian HART
Within without (detail)
digital film, 6 minutes



Kristian LUCAS
Me, myself, I and you (detail)
56.0 x 102.0 cm
oil on canvas



Merryn ALLEN
Japanese illusions (detail)
centre back: 74.0 cm, waist (flat): 42.0 cm
polyester cotton



Ping (Irene) VINCENT
Boxes (detail)
colour photograph



James ATKINS
Light cascades (detail)
three works, 32.0 x 32.0 x 5.0 cm each
glass, fluorescent light, metal



Tim JOINER
14 seconds (detail)
digital film, 1.30 minutes



Lucy McNAMARA
Precariously (detail)
156.0 x 61.0 x 61.0 cm
painted wood, oil paint, egg shells, glue, stainless steel wire

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IMPORTANT INFORMATION

Accreditation period

Units 1–4: 2006–2009

The accreditation period commences on 1 January 2006.

Other sources of information

The *VCAA Bulletin* is the only official source of changes to regulations and accredited studies. The *VCAA Bulletin*, including supplements, also regularly includes advice on VCE studies. It is the responsibility of each VCE teacher to refer to each issue of the *VCAA Bulletin*. The *VCAA Bulletin* is sent in hard copy to all VCE providers. It is available on the Victorian Curriculum and Assessment Authority's website at www.vcaa.vic.edu.au

To assist teachers in assessing school-assessed coursework in Units 3 and 4, the Victorian Curriculum and Assessment Authority publishes an assessment handbook that includes advice on the assessment tasks and performance descriptors for assessment.

The current year's *VCE and VCAL Administrative Handbook* contains essential information on assessment and other procedures.

VCE providers

Throughout this study design the term 'school' is intended to include both schools and other VCE providers.

Photocopying

VCE schools only may photocopy parts of this study design for use by teachers.

Introduction

RATIONALE

Outdoor and Environmental Studies is a study of the ways humans interact with and relate to natural environments. Natural environments are understood to include environments that have minimum influence from humans, but they may also include environments that have been subject to human intervention. Ultimately, the study is directed towards enabling students to make critically informed comment on questions of environmental sustainability and to understand the importance of environmental health, particularly in local contexts.

In this study both passive and active outdoor activities provide the means for students to develop experiential knowledge of natural environments. Such knowledge is then enhanced through theoretical study of natural environments from perspectives of environmental history, ecology and the social studies of human–nature relationships. As a consequence of the importance of the experiential components, Outdoor and Environmental Studies also provides students with the skills and knowledge to safely participate in activities in natural environments and to respect and value the environment. The blend of direct practical experience of natural environments with other more theoretical ways of knowing, enables informed understanding of human–nature relationships.

Historically, humans have modified natural environments to meet survival, commercial, conservation and recreation needs. For many, natural environments have become places for adventure, relaxation, scientific study, social action or enterprise. Natural environments also provide space for connectedness with nature and opportunities for reflection upon the past, present and future. These varying values and approaches generate differing impacts and can cause pressures and tensions between user groups, leading to issues concerning the preservation and sustainability of natural environments. Outdoor and Environmental Studies seeks to enable students to critically analyse these differing relationships, impacts and issues.

Human relationships with the natural environment, different understandings of nature and motivations for interacting with natural environments are considered. The study also focuses on human impacts on natural environments and nature's impact on humans, with a particular focus on outdoor recreation. Ecological, historical and social contexts of relationships between humans and natural environments are investigated as well as use of natural environments and the need to balance outdoor experiences and conservation.

Outdoor and Environmental Studies is relevant to students with a wide range of expectations, including those who wish to pursue further formal study at tertiary level or in vocational education and training settings, as well as providing valuable knowledge and skills for participation in contemporary society.

AIMS

This study is designed to enable students to:

- develop experience-based relationships with, and knowledge of, natural environments;
- develop an understanding of the ecological, historical, economic and social factors which have had an impact on and will influence natural environments over time;
- develop skills and knowledge that promote safe, sustainable interaction with natural environments;
- develop skills and knowledge to live comfortably for short durations in natural environments;
- identify and analyse the strategies and rationales used to protect, conserve and manage natural environments in a sustainable manner;
- understand the implications of trends towards sustainable environmental relationships;
- critically analyse interactions with natural environments in shaping Australian cultural practices.

STRUCTURE

The study is made up of four units:

Unit 1: Understanding outdoor experiences

Unit 2: Environmental impacts

Unit 3: Relationships with natural environments

Unit 4: The future of human–nature interactions

Each unit deals with specific content and is designed to enable students to achieve a set of outcomes. Each outcome is described in terms of key knowledge and skills.

ENTRY

There are no prerequisites for entry to Units 1, 2 and 3. Students must undertake Unit 3 prior to undertaking Unit 4. Units 1 to 4 are designed to a standard equivalent to the final two years of secondary education. All VCE studies are benchmarked against comparable national and international curriculum.

DURATION

Each unit involves at least 50 hours of scheduled classroom instruction. Students should also undertake a minimum of 20 hours of practical outdoor activities per unit. Where possible, teachers are encouraged to include at least one experience in each unit that occurs over more than one day.

CHANGES TO THE STUDY DESIGN

During its period of accreditation minor changes to the study will be notified in the *VCAA Bulletin*. The *VCAA Bulletin* is the only source of changes to regulations and accredited studies and it is the responsibility of each VCE teacher to monitor changes or advice about VCE studies published in the *VCAA Bulletin*.

MONITORING FOR QUALITY

As part of ongoing monitoring and quality assurance, the Victorian Curriculum and Assessment Authority will periodically undertake an audit of Outdoor and Environmental Studies to ensure the study is being taught and assessed as accredited. The details of the audit procedures and requirements are published annually in the *VCE and VCAL Administrative Handbook*. Schools will be notified during the teaching year of schools and studies to be audited and the required material for submission.

SAFETY

Outdoor experiences suited to this study include small groups of students undertaking self-sufficient experiences in more remote outdoor settings, and may include bushwalking, cross-country ski touring, canoe touring, cycle touring, naturalist activities, conservation activities and marine exploration. Activities that use weapons or motorised devices to replace human effort are excluded in this study.

This study may involve students undertaking outdoor adventure activities. Such activities may involve:

- travel into terrain in which contact is restricted in comparison to day-to-day life;
- exposure to the natural elements with less protection than is provided in day-to-day life;
- natural environmental challenges requiring greater reliance on personal resources than would be required in day-to-day life.

It is the responsibility of the school to ensure that duty of care is exercised in relation to the health and safety of all students undertaking the study. The implementation of effective safety management plans and processes should ensure that all activities are conducted safely. This includes ensuring that all rules and regulations for the conduct of outdoor activities are rigorously followed. Teachers should refer to the Department of Education, Employment and Training's *Victorian Government Schools Reference Guide* and publications such as the *Safety in Outdoor Adventure Activities Series* booklets; *Safety Guidelines: Swimming Based Activities and Safety Guidelines* (2001) and *Camping and Bush Activities* (1998).

Effective safety management also includes adequate levels of training of students for the particular activity and outdoor setting, and the selection of a setting that is appropriate for the physical capabilities of the students.

USE OF INFORMATION AND COMMUNICATIONS TECHNOLOGY

In designing courses for this study, teachers should incorporate information and communications technology where appropriate and applicable to the teaching and learning activities. The Advice for Teachers section provides specific examples of how information and communications technology can be used in this study.

KEY COMPETENCIES AND EMPLOYABILITY SKILLS

This study offers a number of opportunities for students to develop key competencies and employability skills. The Advice for Teachers section provides specific examples of how students can demonstrate key competencies during learning activities and assessment tasks.

LEGISLATIVE COMPLIANCE

When collecting and using information, the provisions of privacy and copyright legislation, such as the Victorian *Information Privacy Act 2000* and *Health Records Act 2001*, and the federal *Privacy Act 1988* and *Copyright Act 1968* must be met.

Assessment and reporting

SATISFACTORY COMPLETION

The award of satisfactory completion for a unit is based on a decision that the student has demonstrated achievement of the set of outcomes specified for the unit. This decision will be based on the teacher's assessment of the student's performance on assessment tasks designated for the unit. Designated assessment tasks are provided in the details for each unit. The Victorian Curriculum and Assessment Authority publishes an assessment handbook that includes advice on the assessment tasks and performance descriptors for assessment for Units 3 and 4.

Teachers must develop courses that provide opportunities for students to demonstrate achievement of outcomes. Examples of learning activities are provided in the Advice for Teachers section.

Schools will report a result for each unit to the Victorian Curriculum and Assessment Authority as S (Satisfactory) or N (Not Satisfactory).

Completion of a unit will be reported on the Statement of Results issued by the Victorian Curriculum and Assessment Authority as S (Satisfactory) or N (Not Satisfactory). Schools may report additional information on levels of achievement.

AUTHENTICATION

Work related to the outcomes will be accepted only if the teacher can attest that, to the best of their knowledge, all unacknowledged work is the student's own. Teachers need to refer to the current year's *VCE and VCAL Administrative Handbook* for authentication procedures.

LEVELS OF ACHIEVEMENT

Units 1 and 2

Procedures for the assessment of levels of achievement in Units 1 and 2 are a matter for school decision. Assessment of levels of achievement for these units will not be reported to the Victorian Curriculum and Assessment Authority. Schools may choose to report levels of achievement using grades, descriptive statements or other indicators.

Units 3 and 4

The Victorian Curriculum and Assessment Authority will supervise the assessment of all students undertaking Units 3 and 4.

In Outdoor and Environmental Studies the student's level of achievement will be determined by school-assessed coursework and an end-of-year examination. The Victorian Curriculum and Assessment Authority will report the student's level of performance on each assessment component as a grade from A+ to E or UG (ungraded). To receive a study score, students must achieve two or more graded assessments and receive S for both Units 3 and 4. The study score is reported on a scale of 0–50. It is a measure of how well the student performed in relation to all others who took the study. Teachers should refer to the current year's *VCE and VCAL Administrative Handbook* for details on graded assessment and calculation of the study score. Percentage contributions to the study score in Outdoor and Environmental Studies are as follows:

- Unit 3 school-assessed coursework: 25 per cent
- Unit 4 school-assessed coursework: 25 per cent
- End-of-year examination: 50 per cent

Details of the assessment program are described in the sections on Units 3 and 4 in this study design.

Unit 1: Understanding outdoor experiences

This unit examines the ways in which humans understand and relate to nature through experiences of natural environments. The focus is on the individual and his/her personal relationship with the natural environment.

This unit provides an opportunity for students to explore the many ways in which nature is understood and perceived. Students develop a clear understanding of the range of motivations for interacting with the natural environment and the factors that affect an individual's access to outdoor experiences and relationship with the natural environment.

Through related outdoor experiences, students develop the practical skills and knowledge required to live comfortably, with minimal impact, in natural environments. Teachers should design practical experiences that are linked with theoretical investigation, so students can gain insight into a variety of responses to, and relationships with, nature.

AREA OF STUDY 1

Motivations for outdoor experience

This area of study focuses on students' outdoor experiences to investigate motivations for, and responses to, nature and outdoor experiences. Students investigate a range of contemporary uses and meanings of terms such as 'nature' and 'natural environments'. This area of study introduces a cultural perspective on the ways humans relate to nature. Students evaluate how media portrayals of nature and risk can influence their personal responses to the natural environment.

Practical outdoor experiences should provide students with the opportunity to plan for safe participation in outdoor experiences and develop practical skills related to minimal impact travelling and living. Students use these experiences as the basis for reflection and analysis.

Outcome 1

On completion of this unit the student should be able to analyse ways in which individuals experience, understand and respond to natural environments, with reference to related outdoor experiences.

To achieve this outcome the student will draw on knowledge and related skills outlined in area of study 1.

Key knowledge

This knowledge includes

- the use and meanings of the terms ‘nature’ and ‘natural environments’;
- motivations for seeking outdoor experiences;
- human responses to nature such as fear, appreciation, awe or contemplation;
- media portrayals of nature and outdoor experiences;
- personal responses to risk in outdoor experiences;
- planning for safe participation in outdoor experiences which explore a range of responses to nature;
- understanding related to minimal impact outdoor travel and living.

Key skills

These skills include the ability to

- plan, participate in and reflect upon outdoor experiences;
- analyse information collected during outdoor experiences;
- describe the different ways in which the terms ‘nature’ and ‘natural environment’ are used;
- analyse motivations for seeking outdoor experiences;
- evaluate and report on personal responses to risk in outdoor experiences;
- use media images of nature and outdoor experiences to illustrate personal responses to risk, nature and varying motives for participating in natural environments;
- use appropriate practical skills for minimum impact travelling, living and investigation of natural environments;
- work cooperatively in groups during outdoor and classroom experiences.

AREA OF STUDY 2

Humans and nature

This area of study explores the relationships between humans and nature through direct experiences of different natural environments. Through an investigation of specific natural environments, the different values and responses related to nature that are expressed in the ways in which humans use the natural environment are analysed. Practical outdoor experiences should provide students with the opportunity to observe and experience various ways of encountering and understanding nature. Factors that affect access to outdoor experiences are also considered. Students describe the effect of technology on an individual’s experiences and its influence on how humans understand nature.

Outcome 2

On completion of this unit the student should be able to evaluate factors which influence outdoor experiences, with reference to related outdoor experiences.

To achieve this outcome the student will draw on knowledge and related skills outlined in area of study 2.

Key knowledge

This knowledge includes

- ways in which humans value nature, including as a resource, for recreation, adventure, and spiritual connection, and as a study site;
- different ways of encountering and understanding a specific natural environment visited, including through experiential knowledge, environmental and natural history, ecological, social and economic perspectives;
- factors which affect access to outdoor experiences, including socioeconomic, cultural background, age, gender and physical ability;
- the effect of technology on an individual's outdoor experiences.

Key skills

These skills include the ability to

- plan, participate in and reflect upon outdoor experiences;
- analyse information collected during outdoor experiences;
- analyse the ways in which humans value and encounter nature;
- describe different ways of understanding a specific natural environment from perspectives such as experiential, environmental and natural history, ecological, social and economic;
- analyse factors which affect access to outdoor experiences;
- describe the relationship of technology to outdoor experiences.

ASSESSMENT

The award of satisfactory completion for a unit is based on a decision that the student has demonstrated achievement of the set of outcomes specified for the unit. This decision will be based on the teacher's assessment of the student's overall performance on assessment tasks designated for the unit.

The key knowledge and skills listed for each outcome should be used as a guide to course design and the development of learning activities. The key knowledge and skills do not constitute a checklist and such an approach is not necessary or desirable for determining the achievement of outcomes. The elements of key knowledge and skills should not be assessed separately.

Assessment tasks must be a part of the regular teaching and learning program and must not unduly add to the workload associated with that program. They must be completed mainly in class and within a limited timeframe. Teachers should select a variety of assessment tasks for their assessment program to reflect the key knowledge and skills being assessed and to provide for different learning styles.

For this unit students are required to demonstrate achievement of two outcomes. As a set these outcomes encompass both areas of study.

Demonstration of achievement of Outcomes 1 and 2 must be based on the student's performance on a selection of assessment tasks. Where teachers allow students to choose between tasks they must ensure that the tasks they set are of comparable scope and demand. Assessment tasks for this unit are:

- journal of outdoor experiences;
- case study analysis;
- oral presentations;
- practical reports in non-text format such as multimedia, annotated visual display;
- short reports of outdoor experiences;
- tests;
- written responses.

Unit 2: Environmental impacts

This unit focuses on characteristics of natural environments, human impacts on natural environments, and how changes to nature affect people. The focus shifts from the individual's personal relationship with the natural environment to society's interaction with the natural environment. It includes analyses of historical and contemporary conceptions of nature and human interactions with nature, including nature's impact on humans.

Outdoor recreation provides the means for studying nature's impact on humans, as well as the ecological, social and economic implications of human impact on natural environments. A clear understanding of the impact of technology and changing human lifestyles on natural environments should also be developed.

Students should have more than one related outdoor experience in natural environments, including areas where there is evidence of human intervention. They should continue to develop the practical skills and knowledge required to live comfortably, with minimal impact, for short durations in natural environments. Teachers should design practical experiences that provide the basis for comparison and reflection, and opportunities for students to develop theoretical knowledge about natural environments.

AREA OF STUDY 1

Discovering natural environments

This area of study provides an introduction to the characteristics of natural environments. Students investigate different types of environments and the interrelationships between components within them. The components of natural environments include both biotic and abiotic aspects of the selected natural environment, such as fauna and flora, rocks, soils, sunlight and water.

Students undertake case studies of at least two different types of natural environments so they can observe and experience how changes to nature affect people. They develop appropriate practical knowledge and skills for safe participation in outdoor experiences and investigations in various natural environments. Students should use these experiences as the basis for reflection and analysis of the theoretical material.

Outcome 1

On completion of this unit the student should be able to describe and compare the characteristics and interrelationships between components of two or more natural environments, with reference to related outdoor experiences.

To achieve this outcome the student will draw on knowledge and related skills outlined in area of study 1.

Key knowledge

This knowledge includes

- types and characteristics of selected natural environments such as alpine, marine, coastal, wetlands, grassland, forest, arid;
- the interrelationships between the biotic and abiotic components of selected natural environments visited, including natural changes to those environments;
- effects of natural changes to environments on people and places such as day to night, seasons, tides, fire, flood, drought, migration, succession, climate change;
- features which can be used to delineate one particular area from another, including landform, vegetation type, public and private land, types of parks and reserves, management zones;
- practical skills appropriate in various natural environments.

Key skills

These skills include the ability to

- plan, participate in and reflect upon outdoor experiences;
- analyse information collected during outdoor experiences;
- describe the types and characteristics of natural environments;
- identify different types of natural environments;
- compare and contrast different types of natural environments and describe the interrelationships and changes that occur in them;
- identify the effects of natural changes to environments on people and places;
- gather information and analyse the interrelationships and changes in an environment and the various features which can be used to delineate a particular area.

AREA OF STUDY 2**Impact on nature**

This area of study focuses on identifying human activities undertaken in the natural environment and their impacts on those environments. Although environmental impacts include both natural and human-induced changes on components of the environment, the focus here is on human impact.

Students investigate individual and group responsibilities for activities in natural environments, including codes of conduct for recreational activities and other procedures and practices for minimising and managing human impacts on nature.

Practical outdoor experiences should enable students to investigate skills related to minimal impact travelling and living, and experience examples of the impact of technology on natural environments. Students use these experiences as the basis for reflection and analysis of the theoretical material.

Outcome 2

On completion of this unit the student should be able to evaluate human impacts on natural environments and analyse procedures for minimising and managing these impacts, with reference to related outdoor experiences.

To achieve this outcome the student will draw on knowledge and related skills outlined in area of study 2.

Key knowledge

This knowledge includes

- the impact of conservation, commercial and recreational activities on natural environments;
- procedures and practices for minimising and managing human impacts on nature, such as zoning, access regulations, catch and size limits, landcare, land for wildlife, conservation covenants and pest control;
- codes of conduct for recreational activities, such as those for bushwalking, rock-climbing and surfing;
- the impact of technology on natural environments such as recreational vehicles, snow making, and satellite technology;
- the impact on natural environments of urbanisation, and changing human lifestyles.

Key skills

These skills include the ability to

- plan, participate in and reflect upon outdoor experiences;
- analyse information collected during outdoor experiences;
- identify strategies for minimising human impacts on nature;
- apply minimal impact practices in outdoor experiences in natural environments;
- apply codes of conduct for human interaction with natural environments;
- work together in groups in planning and conducting minimum impact outdoor experiences;
- analyse the impact of technology on natural environments;
- analyse the impact of urbanisation and changing lifestyles on natural environments.

ASSESSMENT

The award of satisfactory completion for a unit is based on a decision that the student has demonstrated achievement of the set of outcomes specified for the unit. This decision will be based on the teacher's assessment of the student's overall performance on assessment tasks designated for the unit.

The key knowledge and skills listed for each outcome should be used as a guide to course design and the development of learning activities. The key knowledge and skills do not constitute a checklist and such an approach is not necessary or desirable for determining the achievement of outcomes. The elements of key knowledge and skills should not be assessed separately.

Assessment tasks must be a part of the regular teaching and learning program and must not unduly add to the workload associated with that program. They must be completed mainly in class and within a limited timeframe. Teachers should select a variety of assessment tasks for their assessment program to reflect the key knowledge and skills being assessed and to provide for different learning styles.

For this unit students are required to demonstrate achievement of two outcomes. As a set these outcomes encompass both areas of study.

Demonstration of achievement of Outcomes 1 and 2 must be based on the student's performance on a selection of assessment tasks. Where teachers allow students to choose between tasks they must ensure that the tasks they set are of comparable scope and demand. Assessment tasks for this unit are:

- journal of outdoor experiences;
- case study analysis;
- oral presentations;
- practical reports in non-text format such as multimedia, annotated visual display;
- short reports of outdoor experiences;
- tests;
- written responses.

Unit 3: Relationships with natural environments

The focus of this unit is the ecological, historical and social context of relationships between humans and natural environments in Australia. The impact of these relationships on natural environments is examined by reflecting on the changing nature of human interactions and relationships with, and perceptions of, the natural environment in Australia since human habitation.

The unit also considers the impact of these natural environments on humans as expressed through contemporary relationships, the media and behaviour in the outdoors. The dynamic nature of relationships between humans and their environment and the factors involved in shaping these relationships are also examined.

Students should have one or more related outdoor experience of natural environments and areas where there is evidence of human intervention. Teachers should design practical experiences that provide the basis for comparison and reflection, and opportunities to develop theoretical knowledge and skills about specific natural environments.

AREA OF STUDY 1

Historical perspectives

This area of study focuses on how Australians have understood and interacted with natural environments over time. Students investigate a range of interactions and relationships with, and perceptions of, natural environments, beginning with indigenous cultures. The demarcations between early non-indigenous settlers from the Goldrush period to Federation, and since Federation have been chosen because of the key events occurring at these times. Through an investigation of key examples, the role of environmental movements in changing human relationships with Australian environments, particularly in the latter part of the twentieth century, is analysed.

Practical outdoor experiences should enable students to investigate human interactions and relationships with, and perceptions of, specific natural environments. Students should reflect on and describe their experiences in relation to the key knowledge in this area of study.

Outcome 1

On completion of this unit the student should be able to describe and analyse how particular interactions and relationships with, and perceptions of, the Australian environment have changed over time, with reference to related outdoor experiences.

To achieve this outcome the student will draw on knowledge and related skills outlined in area of study 1.

Key knowledge

This knowledge includes

- interactions and relationships with the Australian environment as expressed by indigenous cultures;
- interactions, perceptions and relationships with the Australian environment as expressed by: the first non-indigenous settlers; those from the Goldrush period to Federation; and those since Federation;
- the role of environmental movements in changing human relationships with Australian environments, in particular since the 1970s.

Key skills

These skills include the ability to

- plan, participate in and reflect upon outdoor experiences;
- analyse information collected during outdoor experiences;
- describe and compare the interactions and relationships with the land as expressed in indigenous and non-indigenous cultures;
- analyse perceptions and relationships with the land as expressed in indigenous and non-indigenous cultures;
- analyse how changing interactions and relationships have influenced a particular environment.

AREA OF STUDY 2**Contemporary relationships with natural environments**

This area of study focuses on current relationships between humans and the environment. It examines a number of ways the Australian environment is perceived, the dynamic nature of relationships between humans and their environment, and the factors involved in shaping these relationships.

Students investigate a range of patterns and types of interactions with natural environments. They consider the roles of technology and commercialisation in mediating human relationships with natural environments and society's responses to risk taking in natural environments.

Practical outdoor experiences should enable students to collect information and examples. Students use their experiences to reflect on the roles of contemporary views of nature and outdoor experiences in shaping relationships with natural environments, and how these are portrayed.

Outcome 2

On completion of this unit the student should be able to analyse and evaluate factors influencing contemporary relationships with natural environments, and the consequences for humans and the environment, with reference to related outdoor experiences.

To achieve this outcome the student will draw on knowledge and related skills outlined in area of study 2.

Key knowledge

This knowledge includes

- patterns and types of interaction with natural environments, including conservation practices, passive and active recreation, and commerce;
- the role of technology in mediating human relationships with natural environments;
- the role of commercialisation of outdoor experiences in shaping relationships with natural environments;
- contemporary views of natural environments and the ways these are portrayed, for example, in media, behaviour, advertising, music and writing;
- the role of contemporary views of nature and outdoor experiences in shaping relationships with natural environments;
- society's responses to risk-taking behaviour in the outdoors and the impact on nature.

Key skills

These skills include the ability to

- plan, participate in and reflect upon outdoor experiences;
- analyse information collected during outdoor experiences;
- synthesise knowledge and experience of patterns and types of interaction with natural environments;
- analyse contemporary views of natural environments;
- evaluate factors which influence contemporary relationships with natural environments, including media, technology, commercialisation and society's responses to risk taking.

ASSESSMENT

The award of satisfactory completion for a unit is based on a decision that the student has demonstrated achievement of the set of outcomes specified for the unit. This decision will be based on the teacher's assessment of the student's overall performance on assessment tasks designated for the unit. The Victorian Curriculum and Assessment Authority publishes an assessment handbook that includes advice on the assessment tasks and performance descriptors for assessment.

The key knowledge and skills listed for each outcome should be used as a guide to course design and the development of learning activities. The key knowledge and skills do not constitute a checklist and such an approach is not necessary or desirable for determining the achievement of outcomes. The elements of key knowledge and skills should not be assessed separately.

Assessment of levels of achievement

The student's level of achievement in Unit 3 will be determined by school-assessed coursework and an end-of-year examination.

Contribution to final assessment

School-assessed coursework for Unit 3 will contribute 25 per cent to the study score.

The level of achievement for Units 3 and 4 is also assessed by an end-of-year examination, which will contribute 50 per cent to the study score.

School-assessed coursework

Teachers will provide to the Victorian Curriculum and Assessment Authority a score representing an assessment of the student's level of achievement.

The score must be based on the teacher's rating of performance of each student on the tasks set out in the following table and in accordance with an assessment handbook published by the Victorian Curriculum and Assessment Authority. The assessment handbook also includes advice on the assessment tasks and performance descriptors for assessment.

Assessment tasks must be a part of the regular teaching and learning program and must not unduly add to the workload associated with that program. They must be completed mainly in class and within a limited timeframe. Where optional assessment tasks are used, teachers must ensure that they are comparable in scope and demand. Teachers should select a variety of assessment tasks for their program to reflect the key knowledge and skills being assessed and to provide for different learning styles.

Outcomes	Marks allocated*	Assessment tasks
Outcome 1 Describe and analyse how particular interactions and relationships with, and perceptions of, the Australian environment have changed over time, with reference to related outdoor experiences.	40	Any one or more of the following: <ul style="list-style-type: none"> • a written report • a multimedia presentation • a poster • an oral presentation • a short essay • a test.
Outcome 2 Analyse and evaluate factors influencing contemporary relationships with natural environments, and the consequences for humans and the environment, with reference to related outdoor experiences.	60	At least two assessment tasks selected from the following: <ul style="list-style-type: none"> • a written analysis and evaluation • a data analysis or case study • a creative response • a test.
Total marks	100	

*School-assessed coursework for Unit 3 contributes 25 per cent to the study score.

Unit 4: The future of human–nature interactions

This unit focuses on the sustainable use and management of natural environments. It examines the contemporary state of environments in Australia, considers the importance of the maintenance of natural environments and examines the capacity of the natural environment to support the future needs of the world's human population.

The emphasis in this unit is on the need to develop a balance between human needs and the conservation of natural environments. Students consider the skills needed to be environmentally responsible citizens in the context of their lives. They investigate current policies and management strategies for achieving and maintaining healthy environments, and the actions that can be undertaken to achieve and maintain healthy and sustainable environments in contemporary Australian society.

Students should have one or more related outdoor experiences in natural environments. They should apply the practical skills and knowledge required to live sustainably in natural environments, and evaluate the strategies and actions they are using. Teachers should design practical experiences that provide the basis for comparison and reflection, and opportunities for students to develop and apply theoretical knowledge about natural environments.

AREA OF STUDY 1

Healthy natural environments

This area of study explores the contemporary state of environments in Australia and the importance of natural environments to individuals and society. The current and potential impact of damage to natural environments on both individuals and society should be considered.

Practical outdoor experiences should enable students to further develop and apply their practical knowledge and skills for safe and sustainable interaction with natural environments.

Outcome 1

On completion of this unit the student should be able to describe the contemporary state of the environment and evaluate the importance of healthy natural environments for individuals and society, with reference to related outdoor experiences.

To achieve this outcome the student will draw on knowledge and related skills outlined in area of study 1.

Key knowledge

This knowledge includes

- the contemporary state of environments in Australia;
- the importance of healthy natural environments and biodiversity for the future of individual physical and emotional wellbeing;
- the importance of healthy natural environments and biodiversity for the future of society and the potential impact on society of significant damage such as land degradation, loss of biodiversity, pollution through human activity and introduced species;
- practical knowledge and skills for safe and sustainable interaction with natural environments.

Key skills

These skills include the ability to

- plan, participate in and reflect upon outdoor experiences;
- analyse information collected during outdoor experiences;
- analyse the importance of a healthy natural environment for individuals and society;
- identify and predict the potential impact on societies of significant damage to the quality of environments;
- evaluate and report on considerations and actions required to interact sustainably with natural environments.

AREA OF STUDY 2

Sustaining environments

This area of study focuses on the sustainability of environments in order to support the future needs of ecosystems, individuals and society, and the skills needed to be an environmentally responsible citizen. Students investigate case studies of conflicts of interest between people involved in uses of natural environments, and develop a clear understanding of the methods and processes commonly used in attempts to resolve these conflicts.

Students develop an understanding that these methods and processes, along with management strategies employed by individuals and public authorities and a range of policies available, contribute to maintaining the health and sustainability of natural environments in contemporary Australian society.

Practical experiences should enable students to investigate examples of the application of these management strategies and policies. Students should use their experiences to reflect on the actions taken by individuals and groups in contemporary Australia to manage and sustain natural environments.

Outcome 2

On completion of this unit the student should be able to evaluate practices and strategies for sustainable interactions between humans and the environment, with reference to related outdoor experiences.

To achieve this outcome the student will draw on knowledge and related skills outlined in area of study 2.

Key knowledge

This knowledge includes

- conflicts of interest between people involved in uses of natural environments, such as tourism, national parks, public land, farming, conservation and differing types of outdoor recreation;
- the methods used by individuals and groups to influence decisions about the use of natural environments;
- the processes followed by land managers and/or governments or their agencies in making decisions relating to conflicting interests over the use of natural environments;
- management strategies for achieving and maintaining healthy and sustainable environments that may be adopted by public and private land managers;
- current local, state, and national policies related to the management and sustainability of natural environments;
- actions undertaken by individuals and groups in maintaining healthy and sustainable environments in contemporary Australian society.

Key skills

These skills include the ability to

- plan, participate in and reflect upon outdoor experiences;
- analyse information collected during outdoor experiences;
- evaluate methods and processes used in decision making about the use of natural environments;
- analyse the actions undertaken by individuals and groups in the contemporary Australian environment;
- reflect on personal behaviours and practices;
- analyse management strategies for maintaining natural environments;
- identify and describe current local, state and national policies related to managing and sustaining natural environments;
- evaluate policies applicable to managing and sustaining particular natural environments.

ASSESSMENT

The award of satisfactory completion for a unit is based on a decision that the student has demonstrated achievement of the set of outcomes specified for the unit. This decision will be based on the teacher's assessment of the student's overall performance on assessment tasks designated for the unit. The Victorian Curriculum and Assessment Authority publishes an assessment handbook that includes advice on the assessment tasks and performance descriptors for assessment.

The key knowledge and skills listed for each outcome should be used as a guide to course design and the development of learning activities. The key knowledge and skills do not constitute a checklist and such an approach is not necessary or desirable for determining the achievement of outcomes. The elements of key knowledge and skills should not be assessed separately.

Assessment of levels of achievement

The student's level of achievement for Unit 4 will be determined by school-assessed coursework and an end-of-year examination.

Contribution to final assessment

School-assessed coursework for Unit 4 will contribute 25 per cent to the study score.

The level of achievement for Units 3 and 4 is also assessed by an end-of-year examination, which will contribute 50 per cent to the study score.

School-assessed coursework

Teachers will provide to the Victorian Curriculum and Assessment Authority a score representing an assessment of the student's level of achievement.

The score must be based on the teacher's rating of performance of each student on the tasks set out in the following table and in accordance with an assessment handbook published by the Victorian Curriculum and Assessment Authority. The assessment handbook also includes advice on the assessment tasks and performance descriptors for assessment.

Assessment tasks must be a part of the regular teaching and learning program and must not unduly add to the workload associated with that program. They must be completed mainly in class and within a limited timeframe. Where optional assessment tasks are used, teachers must ensure that they are comparable in scope and demand. Teachers should select a variety of assessment tasks for their program to reflect the key knowledge and skills being assessed and to provide for different learning styles.

Outcomes	Marks allocated*	Assessment tasks
Outcome 1 Describe the contemporary state of the environment and evaluate the importance of healthy natural environments for individuals and society, with reference to related outdoor experiences.	40	Any one or more of the following: <ul style="list-style-type: none"> • a written report • a multimedia presentation • a short essay • a test.
Outcome 2 Evaluate practices and strategies for sustainable interactions between humans and the environment, with reference to related outdoor experiences.	60	At least two assessment tasks selected from the following, to be presented in written or multimedia form: <ul style="list-style-type: none"> • a case study • a report • a data analysis exercise • a short essay.
Total marks	100	

*School-assessed coursework for Unit 4 contributes 25 per cent to the study score.

End-of-year examination**Description**

All of the key knowledge and skills that underpin the outcomes in Units 3 and 4 are examinable.

The examination will be set by a panel appointed by the Victorian Curriculum and Assessment Authority.

Conditions

The examination will be completed under the following conditions:

- Duration: two hours.
- Date: end-of-year, on a date to be published annually by the Victorian Curriculum and Assessment Authority.
- Victorian Curriculum and Assessment Authority examination rules will apply. Details of these rules are published annually in the *VCE and VCAL Administrative Handbook*.
- The examination will be marked by a panel appointed by the Victorian Curriculum and Assessment Authority.

Contribution to final assessment

The examination will contribute 50 per cent to the study score.

Advice for teachers

DEVELOPING A COURSE

A course outlines the nature and sequence of teaching and learning necessary for students to demonstrate achievement of the set of outcomes for a unit. The areas of study broadly describe the learning context and the knowledge required for the demonstration of each outcome. Outcomes are introduced by summary statements and are followed by the key knowledge and skills which relate to the outcomes.

Teachers must develop courses that include appropriate learning activities to enable students to develop the knowledge and skills identified in the outcome statements in each unit.

For Units 1 and 2, teachers must select assessment tasks from the list provided. Tasks should provide a variety and the mix of tasks should reflect the fact that different types of tasks suit different knowledge and skills, and different learning styles. Tasks do not have to be lengthy to make a decision about student demonstration of achievement of an outcome.

In Units 3 and 4, assessment is more structured. For some outcomes, or aspects of an outcome, the assessment tasks are prescribed. The contribution that each outcome makes to the total score for school-assessed coursework is also stipulated.

Outdoor and Environmental Studies – linking theory and practice

Experiential education is the foundation of this course. Significant learning occurs during the practical application of the knowledge and skills developed in the classroom. It is vital therefore, that the development of a course reflects the strong links between theoretical and practical understanding that enable students to make critically informed decisions and understand the importance of environmental health.

Teachers should be mindful of the rationale and aims of the study when planning a teaching and learning program. The theoretical material covered in class should underpin practical experiences and wherever possible be explored experientially. Similarly, practical experiences should be able to be drawn upon by teachers to assist students in their attempts to understand the theory covered in class. For example, applying navigation techniques on a bushwalk may result in a better understanding of navigation, but may also form a basis for consideration of more complex navigation techniques and the associated aspects of key knowledge such as the characteristics, structure and function of natural environments. In the same way, a bushwalk may follow the study of the effects of commercial use of a particular area. This outdoor experience may provide a better understanding of effects on that environment as well as the opportunity to collect information that may be used subsequently.

Although no specific outdoor experiences are mandated in the study design, the key knowledge and skills related to the outcomes will be learned through consideration of, and participation in, outdoor experiences.

Recreation activities are used to learn about the natural environment. The activity itself is not intended to be the focus, merely a window for entry into the study. The activities should enable students to develop personal critiques of human–nature relationships. The activities should encourage a sympathetic understanding of nature and allow students to engage in and contribute to informed discussions of environmental issues. Therefore, experiences need to be framed and structured in order to ensure that observation and exploration are key features.

Activities should be selected that:

- allow a journey through an environment;
- encourage self-sufficiency;
- facilitate the observation of the characteristics and types of environments;
- allow students to observe the effects of nature on humans and the effects of humans on nature.

For example, a bushwalk might be of shorter distance to incorporate more detailed observations, discussion and recording, rather than being a test of fitness and stamina. Organising smaller groups will facilitate exploration in preference to the single-file bushwalk. Coastal experiences might include extended rock pool rambles, coastal walks and snorkeling as well as the traditional activities of surfing and body boarding.

Activities that use weapons or motorised devices to replace human effort are excluded in this study. Generally, the choice of an outdoor experience and environment will depend upon the unit's outcomes, local resources, and school policy. Some outcomes may lend themselves to dealing with a number of outdoor experiences and environments, while in others a more detailed consideration of only one or two may be appropriate.

The definition of a natural environment described in the Rationale includes those environments that have minimal influence from humans, but may also include those that have been subject to human intervention. In order to address the key knowledge in Units 3 and 4 especially, it will be necessary to choose venues that have been subject to human intervention.

Teachers should recognise that the focus of the study moves from the individual and the natural environment in Unit 1, to society and the natural environment in Unit 2, to a comparison of historical and contemporary relationships with the natural environment in Unit 3, and finally to a consideration of the future of natural environments in Unit 4.

Unit 3, Area of Study 1, focuses on historical relationships with natural environments. The demarcations of different historical periods (particularly pre- and post-Federation as a marker of the change from the 19th to the 20th centuries) should be seen only as useful constructs for discussing changing interactions and relationships at these different times.

In order to introduce this unit, it is worth briefly considering the natural history of Australia prior to human settlement and within the context of human evolution. This is to provide a foundation for students so that they have a basic understanding of, and are able to describe, the uniqueness of Australia's fauna and flora and its evolutions, and the changes that have occurred since human settlement of Australia. An understanding of the characteristics of the Australian environment before human habitation will also help provide a context for students to understand the change in interactions and relationships with the Australian environment since human habitation.

While it is important to recognise that contemporary indigenous Australians engage in practices that are both traditional and contemporary, the focus in this area of study is on the traditional hunter-gatherer societies prior to the arrival of non-indigenous settlers.

The arrival of European settlers and their conception that the land was owned or possessed by nobody (*terra nullius*) impacted greatly on Aboriginal relationships with the land and students should investigate these changed relationships.

Students should develop an understanding of the effects of the traditions of urban dwellers and people from domesticated rural environments in Europe on the Australian environment, and how their lack of understanding of the local flora, fauna, soils and climate related to their interactions with, perceptions of and impact on the environment.

The historical period separating the early non-indigenous settlers from the twentieth century has been marked by the Gold rush period because of the changing nature of the relationships with the land that were happening around this time, particularly in Victoria. Content here includes the interactions and relationships with the land, management practices and impact of uses on the natural environment during this period.

As with the previous periods, there is no simple characterisation of relationships with the land from the Gold rush period to Federation. While most non-indigenous settlers were concerned with using the land for its mineral and timber resources and for agricultural export purposes, there was also the beginning of an environmental movement.

Development and exports dominated the relationship with the land at this time. Governments were interested in ‘opening up’ the land to settlers for agriculture and grazing, and in timber and mineral reserves; resource conservation was low on the agenda if it appeared at all. Settlers were interested in making money. However, Australia’s first national park was also declared during this period, which reflects some changing perceptions of the Australian environment.

Students explore the history and role of environmental movements in raising community consciousness and achieving conservation of environments in Australia. The emergence of environmental groups campaigning against a range of environmental threats, and the development of international and national concerns and strategies in the 1970s, marked another stage in the changing relationships with the Australian environment. While it is important for students to understand that the environment movement was not just a phenomenon of the 1970s, the emphasis should be on environmental groups that are currently active and relevant to the topics they are studying.

Students should understand that government agencies, such as the Department of Sustainability and Environment, the Environment Protection Authority, Parks Victoria and the Great Barrier Reef Marine Park Authority, for example, are not part of the environmental movement. They may well have been established as a result of community pressure, but they are not environmental groups.

Unit 3, Area of Study 2 focuses on contemporary relationships between humans and the environment. The patterns of human interaction with natural environments – such as numbers of people engaging in different types of activities and the types of activities taking place – have changed over time as a result of the factors listed in the key skills. Students should emphasise the role of the influencing factors in shaping relationships with the natural environment.

While most Australians may no longer see their outdoor environment as hostile and alien, many still ameliorate their experiences of the outdoors through technologies of various kinds. These include applying insect repellents, wearing protective clothing, observing the outdoors through a car/bus/aircraft/chairlift/resort window.

Many Australians now also see their role as stewards or protectors of the environment, hence the green consumer guides, green products on supermarket shelves, the growth of the environment movements and the development of codes of conduct for appropriate behaviours in outdoor environments.

A range of contemporary views of the natural environment and the ways these are portrayed should be considered, with the focus on the way in which these views shape relationships with natural environments. Contemporary views of nature and the outdoor environment are reflected in the growth of ecotourism and in the changing nature of risk-taking activities as a result of developments in technology.

Nature and outdoor experiences are represented by various groups, including the media, in a range of ways including as:

- a resource for meeting human needs
- an adversary
- a gymnasium
- a cathedral
- a museum.

The emphasis should be on the wide-ranging nature of these views rather than developing stereotypes or consensus.

Students should be given the opportunity to explore their own relationships with particular environments that they visit or ones with which they are familiar, and ones that they see portrayed in various forms of media – advertisements, articles, television programs, films, etc. How would they classify each of the views?

Unit 4, Area of Study 1 ‘contemporary’ is taken to mean the current generation. Thus the 20th century probably conveniently ends at the moment around 1970, with the growth of the environment movement signalling contemporary perceptions and relationships. The distinction between the 20th century and contemporary views is less clear, but as the 21st century progresses, the line of demarcation will become more easily defined.

The emphasis is on developing students’ knowledge of, and the range of views about, the state of natural environments. An understanding of the state of natural environments is often closely related to the activities of community environmental groups and of government agencies.

Students should investigate a range of different views about the contemporary state of natural environments in Victoria and Australia so they understand some of the complexities of environmental decision-making, which will be relevant in **Area of Study 2**.

There are also areas of concern about the contemporary state of natural environments in Victoria. Students should investigate what some of these concerns and consequent actions are, and the differing views about the issues, including alpine and marine park developments, native forest clearance, salinity, and greenhouse gas emission restrictions.

The value of healthy natural environments and biodiversity for individuals should be explored in relation to the natural environments students have visited. Students should also focus on the importance of healthy natural environments and biodiversity for human societies (that is, why do humans need natural environments?). Factors might include: aesthetic value, recreation and adventure, intrinsic value, maintenance of environmental stability (including biodiversity) education, economic value, possible future food sources and scientific research.

The concept of biodiversity links students' studies back to Unit 3 and reinforces why it is important to understand the history of the Australian environment. Students learn to appreciate the uniqueness of the biodiversity we have in Australia and why it is so important to conserve Australia's natural environments. The potential impacts on human societies of damage to natural environments are numerous and again students should explore these impacts in relation to the natural environments they are studying and visiting.

Students are provided with an opportunity to develop their practical knowledge of outdoor living, and their abilities to plan and participate in outdoor experiences. Students build on knowledge and skills that may already have been introduced in Units 1 and 2. However, rather than just learning about codes of conduct and procedures for minimising human impact on nature, students should focus upon being able to evaluate the context of particular situations and describe appropriate strategies and actions that will result in sustainable interaction with natural environments.

In **Unit 4, Area of Study 2** teachers should note the use of the term 'method'. 'Method' will be used here as distinct from 'management strategies'.

Examples of conflicts should relate to tourism, national parks, public land, farming, conservation and outdoor recreation. These conflicts occur because different groups of people have different interests in, and beliefs about the uses of, an area. This content can be taught through case studies of the experiences of particular groups including both historical examples.

Some of the methods used to try to influence decision makers about particular issues are effective and some less effective. Students should evaluate the effectiveness of each method in relation to particular examples of environmental conflicts, as well as their application as general principles.

Students should become familiar with the various processes utilised by decision makers to try to resolve conflicting interests about particular environmental use issues. Students should evaluate the effectiveness of each process in relation to particular examples of environmental conflicts, as well as their application as general principles. Students should also investigate management strategies used by Aboriginal groups in various parts of Australia to minimise their impact in natural areas, such as a seasonal calendar.

Students should study policies related to sustainable development, particularly biodiversity and climate change, as well as current policies related to reducing the impact of the use of natural environments. Students should become familiar with these policies and be able to describe and evaluate them in terms of how successful the policies have been in achieving their aims. Wherever possible, students should relate this knowledge to their own personal experiences.

There are many different actions undertaken to minimise human impacts on natural environments. Students should reflect on their personal experiences, but they should also be aware of actions undertaken by others. This may include direct action undertaken by landholders such as planting of wildlife corridors, whole-farm planning, applying land covenants and recycling waste water.

It is important to look at the strategies outlined earlier in terms of those actions that can be taken by individuals and groups in order to work towards maintaining healthy and sustainable environments (that is, what happens on the ground in the implementation), and the government and industry programs that exist to support efforts.

USE OF INFORMATION AND COMMUNICATIONS TECHNOLOGY

In designing courses and developing learning activities for Outdoor and Environmental Studies, teachers should make use of applications of information and communications technology and new learning technologies, such as computer-based learning, multimedia and the World Wide Web, where appropriate and applicable to teaching and learning activities.

Outdoor and Environmental Studies may integrate information and communications technology through the:

- use of PowerPoint and other presentation software to compile individual and group reports;
- design of web pages using FrontPage and similar software;
- use of Publisher or similar software to create newspaper or magazine reports;
- use of Microsoft Word to design hyperlinked worksheets to be completed by others;
- the recording and analysis of data collected during transect and quadrat studies using spreadsheets such as Excel;
- production of an annotated bibliography or completion of Webquest tasks;
- use of filamentality to create a hotlist, scrapbook, treasure hunt and/or subject sampler.


KEY COMPETENCIES AND EMPLOYABILITY SKILLS

Students undertaking the following types of assessment, in addition to demonstrating their understanding and mastery of the content of the study, typically demonstrate the following key competencies and employability skills.

Assessment task	Key competencies and employability skills
Journal of outdoor experiences	Planning, reflection and organisation
Case study analysis	Problem-solving; Planning, reflection and organisation, (written) communication, initiative and enterprise, self management
Essay	Planning, reflection and organisation, (written) communication, self management, problem solving
Written report	Planning, reflection and organisation, (written) communication, self management, problem solving
Practical reports in multimedia format	Self management, planning, reflection and organisation, initiative and enterprise (teamwork); problem solving, use of technology
Oral presentation	Planning, reflection and organisation, (oral) communication, self management, organising and managing resources
Short reports of outdoor experiences	Planning, reflection and organisation, (written) communication, self management
Test	Problem solving, planning, reflection and organisation, (written) communication, self management
Written response	Planning, reflection and organisation, (written) communication, self management, problem solving

In completing work for this study, students may also demonstrate other key competencies and employability skills, such as working with others and in teams, and using mathematical ideas and techniques.

LEARNING ACTIVITIES

Examples of learning activities for each unit are provided in the following sections. Examples highlighted by a shaded box are explained in detail in accompanying boxes. The examples that make use of information and communications technology are identified by this icon .

Unit 1: Understanding outdoor experiences

AREA OF STUDY 1: Motivations for outdoor experience

Outcome 1

Analyse ways in which humans experience, understand and respond to natural environments, with reference to related outdoor experiences.

Examples of learning activities

plan and participate in a selected outdoor activity such as a coastal walk, canoe tour, forest walk, cross country ski tour, bike tour, sailing trip, climbing trip; write a report outlining the practical skills required for the activity and how these assist in exploring a natural environment



using computer graphics, design an annotated poster or create an artistic representation of a natural environment in an area where you have undertaken an outdoor experience



invite an adventurer to talk about his/her personal experiences to your class; prepare a PowerPoint presentation about the adventure, describing the person's experiences and motivation for undertaking the adventure

analyse accounts of experiences gathered from magazines, videos, books and other sources to compare and contrast motivational reasons for participating in outdoor experiences

undertake a survey of articles in the outdoor experience-focused media and evaluate their possible impact on participation; analyse your data of stereotypical portrayals of outdoor experiences, such as heroic adventurers, gender representation and foolhardy activities/expeditions

using a range of children's stories and books, explore the imagery associated with humans encountering and responding to nature

collect and examine promotional material available for a specific natural environment; arrange to visit that environment; prepare a brief oral presentation comparing the visit with the study of the specific environment

undertake a new practical experience and learn a skill that is required for safe participation in that activity; record impressions of the natural environment from a 'newcomers' point of view

design a code of conduct for an activity that promotes minimal impact and maximum safety



undertake practice navigational exercises using a Geographical Positioning System (GPS) and compass

conduct a survey in the field to find out why people participate in outdoor activities

Detailed example**SURVEY ABOUT PARTICIPATION**

As a class, list the various outdoor experiences that people have participated in.

In small groups, make a list of the reasons why people participate in these pursuits.

Use the information to develop a survey to investigate:

- the range of activities that people participate in
- what motivates people to participate in various activities
- responses to nature resulting from participation in activities.

Conduct your survey at a selected outdoor venue, and include people from various ages and social groups.

Analyse your results to find out:

- most popular activities
- major reasons for participation
- ways in which people respond to the natural environment, including fear, excitement and awe.

Prepare a written report of your findings and present this information to the class.

AREA OF STUDY 2: Humans and nature**Outcome 2**

Evaluate factors which influence outdoor experiences, with reference to related outdoor experiences.

Examples of learning activities

discuss how nature may be understood by such individuals as a field naturalist, a geologist, a farmer, an ecologist or an artist

plan and participate in a selected outdoor experience; keep diary-like entries from an 'alternative' perspective, e.g. an economic viewpoint; a social view of the activity and the natural environment used



develop a time line describing how an area has been used by different groups, such as indigenous people, early settlers, farmers, artists, environmentalists and developers; present your results in a PowerPoint presentation

through small group discussions, explore a range of historical accounts of specific natural environments and describe changes in human interactions with these natural environments over time

collect and examine promotional material about a specific natural environment; arrange to visit that environment; prepare a brief oral presentation that compares your visit with the material you studied

identify and describe factors that affect accessibility to natural environments and outdoor experiences such as age, gender, socioeconomic status and physical ability; prepare a report that evaluates the effect of these factors on people's access to a natural environment you have visited

participate in outdoor activities using equipment from different eras in order to analyse the effect of technology on an individual's outdoor experience

Detailed example**EFFECT OF TECHNOLOGY**

Plan an outdoor experience in a local environment that focuses on minimising the level of technology used.

As a group, decide on some guidelines about what level of technology is acceptable (for example, will you use stoves, tents, sleeping bags and/or backpacks?).

Seek out your own equipment similar to that used in the past, such as backpacks to use on the trip.

In your journal, record the ways in which technology influences your experience in the outdoors.

Evaluate the ways in which technology influences what you can learn about a natural environment.

Unit 2: Environmental impacts**AREA OF STUDY 1: Discovering natural environments****Outcome 1**

Describe and compare the characteristics and interrelationships between components of two or more natural environments, with reference to related outdoor experiences.


Examples of learning activities


collect photographs illustrating a natural environment you have visited and use them to show the use of appropriate skills related to safe minimal impact


create an annotated poster representing the characteristics of a natural environment you have visited, including the living and non-living components of the environment


on a map of Victoria, mark different types of natural environments, such as box-ironbark forests, alpine regions and riverine wetlands

construct a transect or quadrat to show vegetation patterns observed during an outdoor experience


 access a Geographical Information System (GIS) to describe the characteristics of an environment

 during an outdoor experience, observe and record relationships between living things; on your return to school construct interactive food webs to educate others about the interrelationships between components of natural environments

 develop a three-dimensional concept map illustrating land form, vegetation and other features of a visited outdoor environment

 use time-lapse photography to show short-term change in a natural environment

design a flow chart to show short-term and long-term changes of a specific site

 use a digital camera to record a journey; show environmental features such as land form, vegetation type and watershed

observe differences between public and private land while on trips; outline the characteristics

Detailed example**ECOLOGICAL INVESTIGATION**

Compare and contrast two 1 square metre quadrat in the alpine area to assess the impact of grazing on the composition of plant species. One quadrat should be grazed land and the other relatively untouched.

The following points should be considered:

- vegetation with tussocks of grass
- nature of the soil surface

- concentration of stones
- formation of a stone pavement as more soil is either washed or blown away
- colonisation by shrubs.

The report should include visual representation of the two quadrat and summary conclusions.

AREA OF STUDY 2: Impact on nature**Outcome 2**

Evaluate human impacts on natural environments and analyse procedures for minimising and managing these impacts, with reference to related outdoor experiences.

Examples of learning activities

construct a time line of technological developments in a specific outdoor pursuit; analyse the role of technology in mediating the impact of humans on a selected natural environment

observe, record and evaluate evidence of the impact of commercial, recreation and conservation activities during an outdoor experience to a specific natural environment

develop an understanding of the effect of changing human lifestyles on natural environments by conducting a survey of when leisure time occurs amongst the users of a venue and what activities they participate in



using a digital camera, document the minimal impact procedures and practices used by students when planning, preparing for and conducting an outdoor experience; provide an analysis of their impact on the natural environment

choose different types of natural environments and outline the various recreational and commercial uses and restrictions in those areas

produce a flow chart to illustrate ways in which human impact on natural environments can be reduced through specific activities

outline restrictions for participation in a natural environment and explain the effects if the restrictions were lifted



access data and information on the Internet about codes of conduct for participation in a practical activity; construct your own minimal impact code for an outdoor activity you will participate in

apply a particular form of conservation policy to an environment, such as investigating laws which might apply to sand dunes, trail bikes, cats, fishing, foxes or fire, to minimise impact on natural environments

Detailed example**COMMERCIAL, RECREATION AND CONSERVATION USES**

Visit an area of high human impact as part of an outdoor experience.

1. Collect data on the commercial, recreational and conservation uses of the site.
2. Select one type of use and identify the human impacts associated with that use which could be minimised.

3. Develop a strategy for a commercial use, a code of conduct for a recreation use or a management proposal to improve upon a conservation use.
4. Where such protocols already exist, analyse how successfully they have been implemented.

Detailed example**IMPACT EVALUATION**

Plan and conduct an outdoor experience using minimal impact procedures and practices.

Outline the characteristics and actions of your group in terms of their environmental impact, including:

- size of the group
- method of waste disposal
- campsite practice such as methods of cooking and cleaning

- equipment use
- interaction with vegetation and wildlife
- care of water supply
- noise.

Document examples of these practices using a digital camera.

Evaluate the effectiveness of your group in minimising their impact on the environment.

Unit 3: Relationships with natural environments

AREA OF STUDY 1: Historical perspectives

Outcome 1

Describe and analyse how particular interactions and relationships with, and perceptions of, the Australian environment have changed over time, with reference to related outdoor experiences.

Examples of learning activities

identify and describe characteristics before human habitation, including the formation of the landscape and the geography/geology of an area, during an outdoor experience

investigate indigenous land practices which affected the flora and fauna of a specific natural environment

investigate case studies of interactions and relationships with the Australian environment as expressed by indigenous cultures, including interviews, and contrast with other indigenous cultures around the world

investigate aspects of early non-indigenous exploration of the Australian environment such as the experiences and attitudes toward the environment, by retracing the path of an early non-indigenous explorer; researching diary records or similar evidence, or reading and analysing personal accounts



either in person or using the Internet, visit art galleries, libraries and museums and analyse how relationships with the Australian environment as expressed by non-indigenous settlers have changed over time

survey local long-term residents about changes in the area that have affected the natural environment and develop an annotated time line



reflect on an outdoor experience to analyse how perceptions at a particular time have influenced a specific natural environment; construct a time line, multimedia presentation or annotated display of changes in interactions and relationships with that natural environment

write a newspaper article based upon an outdoor experience outlining the relationship between people and the natural environment at a particular venue and time

compare and contrast contemporary indigenous and non-indigenous land use practises at a venue subject to a native title claim



use the Internet and other sources to investigate the history of an environmental movement in Australia; develop an annotated time line to illustrate your findings and highlight the key events in the formation of the environmental movement

visit a site of conservation interest which has been preserved through the actions of environmentalists; invite environmentalists to describe formative influences on their lives and their current activities with an environmental group

Detailed example**CHANGING RELATIONSHIPS WITH THE LAND**

Use Wheatley & Rowlands (1987) *My Place* (see Resources) as an example of the type of time line about a particular location that could be developed.

Allocate each student a particular period (perhaps decade) in the history of his or her local area to investigate and report on.

For each period:

1. Describe the physical state of the land at that particular time.
2. Construct a story about a particular resident in the area at that time. This can be developed through interviews, investigation of historical

records, and/or through creative writing based on research.

3. Discuss the relationship that people had with the land at that particular time.
4. Produce a visual representation of the area in the particular period.
5. Either individually or in groups, present findings. This could take the form of an oral presentation, using overhead transparencies and/or a written presentation including maps, photographs or stories to be displayed around the walls of the classroom.

Detailed example**CURRENT AND HISTORICAL PERCEPTIONS OF A NATURAL ENVIRONMENT**

Visit a site that is subject to a native title claim. Journey through the land observing current land use practices. Focus on current perceptions and practices of land use, and consider the values that underpin them and their historical origins.

Through research and personal contact with Aboriginal communities, rangers and other stakeholders, examine how land use practices would change in the event of a successful native title claim. Consider issues such as relationship to the land, sustainable practice and conflict over land use.

AREA OF STUDY 2: Contemporary relationships with natural environments

Outcome 2

Analyse and evaluate factors influencing contemporary relationships with natural environments, and the consequences for humans and the environment, with reference to related outdoor experiences.

Examples of learning activities

use data such as ABS statistics, tourism promotional material and surveys to compare and contrast changing lifestyles with participant profiles and the effect on natural environments

develop an annotated visual display illustrating the patterns of interaction with the natural environment at a selected venue

experience the changing landscape and influence of humans on the landscape by paddling, walking, riding from a remote to an urban setting; conduct a survey along the route to find out different community perceptions of the environment



use the Internet and other resources to investigate the contemporary views of nature and a specific natural environment that are held by a group of scientists, miners, governments, adventurers, recreationalists, artists, landholders and people from different cultural backgrounds



investigate and describe changing relationships with the land and understandings about nature reflected in a range of contemporary media, including books, photographs, artworks, films, magazines, newspapers, music, radio and television, poems, short stories and websites



visit art galleries, libraries and museums on the Internet and view and report on current images of Australian environments



using a digital camera, record images during an outdoor experience that portray the environment as a resource for exploration, as an adversary or as a gymnasium; present the images for discussion in the classroom

analyse and evaluate the way in which magazines, newspapers and journals use images of the natural environment (such as in advertising) to portray contemporary views of Australian environments

analyse the role of the commercialisation of outdoor experiences, such as lifestyle programs, specialist magazines and packaged adventure, in shaping relationships with natural environments

during an outdoor experience, observe and record the measures taken to enhance safety and reduce risk, such as signs, snow pole lines, steps and recreational regulations, and evaluate the implied views of nature of these actions; discuss how social responses to risk taking reflect particular views of the natural environment and analyse their effectiveness in reducing risk

analyse responses across the media, including print, television and radio, to outdoor misadventures

undertake outdoor experiences at a developed and less-developed venue; compare impact on the environment and discuss the link between technological advances in equipment with the growth of commercial enterprises offering outdoor experiences

Detailed example**PATTERNS OF INTERACTION – ANNOTATED VISUAL DISPLAY**

Select a natural environment that you have visited.

Collect photographs, maps and other images of the selected environment.

Arrange the visual images and comment upon the natural environment and the various ways in which humans perceive and interact with this area.

You could also include:

- an overview of your experience at the site
- a summary of the patterns and types of interactions that currently occur at the site
- an evaluation of the ways in which this natural environment has been portrayed.

Unit 4: The future of human-nature interactions**AREA OF STUDY 1: Healthy natural environments****Outcome 1**

Describe the contemporary state of the environment and evaluate the importance of healthy natural environments for individuals and society, with reference to related outdoor experiences.

Examples of learning activities

complete a case study of a natural environment and produce a practical report based on collection of data such as soil sampling, water quality testing, vegetation profiles, vegetation quadrates, species count

read and analyse secondary information and data on the effect of environmental degradation on the viability of a civilisation or society

visit an area of high pollution and try to trace the source of the pollution (for example, follow drainage systems to their origin); construct a flow-chart of an example of environmental degradation; discuss sustainable practices which could prevent the pollution



use the Internet to investigate the negative impact of introduced or native species on humans and nature and specific natural environments

investigate examples of environmental degradation such as erosion, dune destruction, reduced water flow, pollution; evaluate the causes and possible solutions

write an essay on the impact of human society on a particular natural environment; consider the range of recreation activities occurring at the venue and the impact of each activity; compare and contrast sustainable and unsustainable practices

plan and implement a practical trip which involves travelling from an area of low human impact in the environment to one of high impact, e.g. paddling towards an urban area, cross-country skiing into a resort; compare and contrast change and impact of human habitation; focus on the quality of the natural environment in each area

visit a local municipality to discuss their plan and vision for sustainable development of the area's environment



analyse statistical data for a natural area and make informed predictions on future environmental changes and sustainability

write a practical report, including visual representation, comparing and contrasting the impact on two 1 square metre areas of a natural environment from a recreation, conservation or commercial activity



explore personal consumption patterns through the use of ecological foot printing software and their contribution to issues such as global warming, species loss and environmental degradation

Detailed example

CASE STUDY OF A NATURAL ENVIRONMENT

Use a natural environment you have visited as the basis for a case study focusing on the importance of healthy natural environments for individuals and society.

The case study should be in written or multimedia format. It should:

- describe the state of the selected environment
- analyse data which will show the impact of damage from human interaction on the selected environment
- briefly summarise the impact
- describe the importance of this environment for biodiversity
- identify the potential impact on society of significant damage to the selected environment
- identify the potential impact on society of significant loss of economic activity associated with the selected environment
- include a plan for the future.

AREA OF STUDY 2: Sustaining environments

Outcome 2

Evaluate practices and strategies for sustainable interactions between humans and the environment, with reference to related outdoor experiences.

Examples of learning activities

investigate case studies for a range of environments which have been the focus of either Environmental Effects Statements and/or Sustainable Management Plans; summarise findings and recommendations

after discussion with a land manager, evaluate how the management plan of a venue you have visited reflects local, state and/or national conservation policies

visit an organic, permaculture or other sustainable-development farm project, such as the Collingwood Children's Farm or CERES; compare and contrast practices with those of other farms and their ability to achieve stated aims; evaluate the importance of the natural environment in urban areas

develop a management proposal to manage an area popular with tourists, according to principles of minimal impact and sustainability

investigate case studies of selected environmental movements in Australia; explain and analyse a major Australian environmental conflict in the history of the group in terms of values towards the land

identify and discuss methods that interest groups could use to influence governments and the public; evaluate the effectiveness of each method

discuss the processes involved in decision-making related to an environmental decision; evaluate the effectiveness of each process



use the Internet, journals and other print sources to investigate the influence and impact of local, state and national environmental legislation and policies on natural environments you have visited

discuss and evaluate strategies for achieving and maintaining health and sustainability relevant to a specific natural environment

identify and investigate a current environmental issue; present arguments for a range of stakeholders involved; debate the issue in class; develop strategies for resolving the issue

discuss the role of government, private groups and individuals in developing strategies for maintaining healthy and sustainable environments

invite a specialist in an area of environmental planning to discuss current projects for achieving sustainable environmental relationships

Detailed example**PROCESSES OF DECISION-MAKING**

Identify a current environmental issue. Visit the area as part of an outdoor activity.

Identify any interest groups that have become involved, have formed or could form as a result of the issue.

Outline the position held by the groups involved.

Outline the methods you would utilise to advance the position of each side.

Who would you target to lobby for each side?

As an independent party, what processes would you use to resolve the dispute?

Evaluate the effectiveness of the processes you have identified in contributing to sustainable interactions between humans and the natural environment in question.

SCHOOL-ASSESSED COURSEWORK

In Units 3 and 4 teachers must select appropriate tasks from the assessment table provided for each unit. Advice on the assessment tasks and performance descriptors to assist teachers in designing and marking assessment tasks will be published by the Victorian Curriculum and Assessment Authority in an assessment handbook. The following is an example of a teacher's assessment program using a selection of the tasks from the Units 3 and 4 assessment tables.

Outcomes	Marks allocated	Assessment tasks
Unit 3		
Outcome 1 Describe and analyse how particular interactions and relationships with, and perceptions of, the Australian environment have changed over time, with reference to related outdoor experiences.	40	A multimedia presentation that describes and compares the changing interactions and relationships of humans with the natural environment and the impact on the environment of these interactions.
Outcome 2 Analyse and evaluate factors influencing contemporary relationships with natural environments, and the consequences for humans and the environment, with reference to related outdoor experiences.	60	A case study that utilises information collected during outdoor experiences to evaluate the patterns and types of interaction with natural environments and their consequences for human and environmental futures. and A creative response that analyses contemporary views of natural environments and the impact of these views in shaping relationships with natural environments.
Total marks for Unit 3	100	
Unit 4		
Outcome 1 Describe the contemporary state of the environment and evaluate the importance of healthy natural environments for individuals and society, with reference to related outdoor experiences.	40	A written report that evaluates the kind of behaviour required for sustainable interaction with a natural environment.
Outcome 2 Evaluate practices and strategies for sustainable interactions between humans and the environment, with reference to related outdoor experiences.	60	An analysis and evaluation of management strategies for achieving and maintaining healthy environment(s) and A data analysis evaluating processes used in making decisions relating to conflicts of interest over the use of natural environments.
Total marks for Unit 4	100	

SUITABLE RESOURCES

Some of the print resources listed in this section may be out of print. They have been included because they may still be available from libraries, bookshops and private collections.

At the time of publication the URLs (website addresses) cited were checked for accuracy and appropriateness of content. However, due to the transient nature of material placed on the web, their continuing accuracy cannot be verified. Teachers are strongly advised to prepare their own indexes of sites that are suitable and applicable to the courses they teach, and to check these addresses prior to allowing student access.

GENERAL

Books

Alexandra, J, Higgins, J & White, T 1998, *Environmental Indicators for National State of the Environment Reporting: Community and Local Uses*, Department of the Environment, Canberra.

Alpin, G 1998, *Australians and the Environment: An Introduction to Environmental Studies*, Oxford University Press, Victoria.

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Australian Greenhouse Office, 1998, *The National Greenhouse Strategy: Strategic Framework for Advancing Australia's Greenhouse Response*, Canberra.

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Beattie, A 1995, *Biodiversity: Australia's Living Wealth*, Reed Books, NSW.

Black, J, Gough, A & Pleasants, K 2005, *Outdoor & Environmental Studies VCE Units 1–4*, Thomson Learning, Victoria.

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Bureau of Meteorology, 1995, *Storm Spotter's Handbook*, Victoria.

Byrt, G 1982, *Environmental Starters: Survival Special*, Gould League of Victoria, Victoria.

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Copeland, C & Lewis, D (eds) 1997, *Saving Our Natural Heritage? The Role of Science in Managing Australia's Ecosystems*, Halstead Press, NSW.

Costermans, LF 1994, *Trees of Victoria and Adjoining Areas*, Costermans Publishing, Frankston, Victoria.

Department of the Environment, Sport and Territories, 1992, *National Strategy for Ecologically Sustainable Development*, Canberra.

Department of Conservation and Natural Resources, 1996, *Forest Education Project Materials*, East Melbourne, Victoria.

Department of Education, 1991, *Safety Guidelines: Rockclimbing and Abseiling*, Victoria.

Department of Education, 1992, *Safety Guidelines: Snow Activities*, Victoria.

Department of Education, 1998, *Safety Guidelines: Camping and Bush Activities*, Victoria.

Department of Education 2001, *Safety Guidelines: Swimming Based Activities*, Victoria

Department of Natural Resources and Environment, 1997, *Saltwatch – A Resource Book for Schools*, rev edn, East Melbourne, Victoria.

Department of Natural Resources and Environment, 1998, *Leadbeater's Possum Recovery Plan 1998–2002*, East Melbourne, Victoria.

Department of Natural Resources and Environment, 1998, *Forests and Fire: Spotlight on the Forest*, East Melbourne, Victoria.

Department of Natural Resources and Environment, 1998, *Victoria's Biodiversity: Directions in Management*, East Melbourne, Victoria.

Department of Natural Resources and Environment, 1998, *Victoria's Biodiversity: Our Living Wealth*, East Melbourne, Victoria.

Department of Natural Resources and Environment, 1998, *Victoria's Biodiversity: Sustaining Our Living Wealth*, East Melbourne, Victoria.

- Department of Natural Resources and Environment, 1999, *The Forest Fieldwork File*, East Melbourne, Victoria.
- Department of the Environment, Sport and Territories, 1996, *The National Strategy for the Conservation of Australia's Biological Diversity*, Canberra.
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- Department of Sustainability & Environment, 2003, *Marine National Parks Education Kit*, East Melbourne, Victoria.
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- Fineberg, W 1993, *Tapping into the Future*, Melbourne Water & STAV Publishing, Victoria.
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- Marsden, J & Tan, S 2000, *The Rabbits*, Lothian, Victoria.
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- Muir, B 1998, *The Wind in my Hair*, Viking, Ringwood, Victoria.
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- Nicholls, C (ed.) 2002, *Luarnpa: The Magical Kingfisher*, Working Title Press, SA.
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JOURNALS

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Australian Journal of Environmental Education, Australian Association for Environmental Education.

Australian Journal of Environmental Management, Environment Institute of Australia.

Australian Journal of Outdoor Education, Journal of the Outdoor Council of Australia Inc.

Ecos, CSIRO.

Eingana – A Journal of Environmental Education, Victorian Association for Environmental Education

FOE Newsletter, Friends of the Earth.

Greenpeace Australia News, Greenpeace Australia.

Habitat, Australian Conservation Foundation.

Journeys, Victorian Outdoor Education Association.

Nature Outlook, Department of Sustainability and Environment.

Parkwatch, Victorian National Parks Association.

Shorelines, Environment Australia.

The Web, Threatened Species Network.

Wild Magazine, Baxter C (ed.) Wild Publications, Melbourne.

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Biodiversity – The Web of Life (video) 2003, Video Education Australia.

Blockade – Anti-logging Protest at Errinundra (video) 2001, Video Education Australia.

Building the Future – The Balance between Exploitation and Conservation (video) 2000, Video Education Australia.

Bushwalking Australia (video) 2001, Video Education Australia.

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Community Action and the Environment (video, DVD) 2003, Video Education Australia.

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Ecotourism – A case Study (video) 2002, Video Education Australia.

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Expedition Skills (video) 2002, Video Education Australia.

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Exploring Indigenous Australia Series – Land Kinship & Culture (video) 1999, Video Education Australia.

Finding Your Way (video) 1992, Video Education Australia.

From Wave Hill to Wik and Beyond (video) 1999, Video Education Australia.

Fuel for the Future – Renewable Resources to replace Fossil Fuel (video) 1999, Video Education Australia.

Future Harvest – Case Studies in Australian Sustainable Agriculture (video) 1998, Video Education Australia.

Introduced Pests (video) 2002, Video Education Australia.

Jabiluka Uranium Mine – A History of Controversy (video) 1999, Video Education Australia.

Koorie Cultural Awareness (CD-ROM) 2001, Video Education Australia.

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Living with Fire – Bushfires and land Management in Australia (video) 2002, Video Education Australia.

Mabo Myths – ABC's Best of Lateline Series (video) 1999, Video Education Australia.

Man from Snowy River (feature film, available on Twentieth Century Fox video release, 1997).

Natural Connections (video) 1999, Video Education Australia.

Picnic at Hanging Rock (feature film, available on Home Vision Cinema video release, 1999).

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Preserving Our Soil – Conservation Farming (video) 1998, Video Education Australia.

Reclaiming Our Earth – Salinity Success Stories (video) 2002, Video Education Australia.

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Simply Living – Towards a Sustainable Future (video) 2003, Video Education Australia.

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The Keepers of the Planet Series – The Earth's Pharmacy (video) 2001, Video Education Australia.

The Salty Country – Australia's Salinity Crisis and the Search for Possible Solutions (video) 1999, Video Education Australia.

The Search for the Never Never – Major Australian Environmental Conflicts (video) 2000, Video Education Australia.

The State of the Nation 2001 – Updating Australia and Global Warming (video) 2001, Video Education Australia.

The Urban Explosion (video) 1997, Video Education Australia.

The Wave of the Future: Australia – Beyond the Fatal Shore Series (video) 2000, Video Education Australia.

Understanding Wik (video) 1997, Video Education Australia.

Walk Softly (video), Tasmanian Parks & Wildlife Service.

Walking Through a Minefield – Land Rights Versus Mining Rights (video) 1999, Video Education Australia.

Wasting the Woods (video) 2002, Video Education Australia.

World in Balance – Balancing Economic Development and Environmental Protection (video) 1995, Video Education Australia.

Yookamurra...Yesterday (video) 2003, Video Education Australia.

MUSIC/POEMS

Music/lyrics of Australian musicians such as: Midnight Oil, Red Gum, Goanna, Yothu Yindi and Paul Kelly.

Works of Australian writers such as: Henry Lawson, AB (Banjo) Patterson, Oodgeroo Noonuccul (Kath Walker) and Richard Flanagan.

CD-ROMs/SOFTWARE

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Australia State of the Environment, 2001, CSIRO, Canberra.

Australian Home Greenhouse Scorecard, 1995 (IBM and Macintosh), Environment Protection Authority.

Classic Wild Walks of Australia, 2000, Win 95 x Rankin Publishers.

Ecotrekker: An Environmental Mystery, 1995 (IBM and Macintosh), CSIRO.

The Bay: An Ecological Management Game, 1997 (IBM and Macintosh), CSIRO.

WEBSITES

A Guidebook to Environmental Indicators
www.csiro.au/csiro/envind/index.htm

Australian Council Health Physical Education and Recreation
www.achper.vic.edu.au

Australian Association for Environmental Education
www.aeee.org.au

Australian Biodiversity
www.deh.gov.au/biodiversity

Australian Bureau of Meteorology
www.bom.gov.au

Australian Bureau of Statistics
www.abs.gov.au

Australian Conservation Foundation
www.acfonline.org.au

Australian Ecosystems
www.gullivermedia.com.au/eco.html

Australian Geological Survey Organisation
www.agso.gov.au

Australian Greenhouse Office
www.greenhouse.gov.au/

Australian Minerals and Energy Environment Foundation
www.ameef.com.au

Australian Trust for Conservation Volunteers
www.netconnect.com.au/~atcv

Camping Association of Victoria
www.cav.asn.au

Centre for Education and Research in Environmental Strategies (CERES)
www.ceres.vic.edu.au

Department of Sustainability and Environment
www.dse.vic.gov.au/dse/

Environment Protection Authority
www.epa.vic.gov.au

Environment Victoria Inc.
 Email: envict@peg.apc.org

Greening Australia (Victoria) Inc.
www.vicnet.net.au/~gavic

Greenpeace
www.greenpeace.org

Land Channel
www.land.vic.gov.au

Melbourne Water Communication Group
www.melbournewater.com.au/education

Minerals Council of Australia
www.minerals.org.au

Parks Victoria
www.parkweb.vic.gov.au

Saltwatch
www.saltwatch.org.au

Sport and Recreation Victoria
<http://sport.vic.gov.au/web/srv/srvsite.nsf/pages/srvhome>

The Environment Protection & Heritage Council
www.ephc.gov.au

The Gould League
www.gould.edu.au

The Online Environmental Community
www.envirolink.org

The Wilderness Society
www.wilderness.org.au

Threatened Species Network (Victoria)
www.nccnsw.org.au/member/tsn

Tourism Victoria
www.tourism.vic.gov.au

Tread Lightly Australia
www.treadlightlyaustralia.com.au

Victorian Association for Environmental Education
www.vaee.vic.edu.au

Victorian Outdoor Education Association
www.voea.vic.edu.au

Video Education Australia (VEA)
www.vea.com.au

World Health Organisation
www.who.int

World Wildlife Fund Australia
www.wwf.org.au

ORGANISATIONS

Australian Motorcycle Trail Riders Assoc. Inc.
 PO Box 8
 Ringwood Vic 3134
 Tel: (03) 9513 8330

Australian Trail Horse Riders Association (Vic)
 7 Searle Court
 North Dandenong Vic 3175
 Tel: (03) 9795 7730

Bicycle Victoria
 15–19 O'Connell Street
 GPO Box 1961R
 North Melbourne Vic 3051
 Tel: 1800 639 634

Birds Australia
 415 Riversdale Rd
 Hawthorn East Vic 3123
 Tel: (03) 9882 2622

Bushwalking and Mountaineering Training Advisory Board Inc.
 GPO Box 2392V
 Melbourne Vic 3000
 Tel: (03) 9666 4319

Caving Club of Victoria
 PO Box 254
 Mulgrave Vic 3170
 Tel: (03) 9888 3696

Climbing Instructors Association
 GPO Box 103
 Natimuk Vic 3409
 Tel: (03) 5387 1332

Duke of Edinburgh's Award
Ground Floor
232 Victoria Parade
East Melbourne Vic 3002
Tel: (03) 9412 6685

Federation of Victorian Walking Clubs Inc. (Vicwalk)
332 Banyule Road
View Bank Vic 3084
Tel: (03) 9455 1876

Field Naturalists Club of Victoria Inc.
Locked Bag 3
Blackburn Vic 3130
Tel: (03) 9877 9860

Four Wheel Drive Association of Victoria
Centre Way
Greythorn Vic 3104
Tel: (03) 9857 5209

Outdoor Recreation Centre (ORC)
332 Banyule Rd,
View Bank Vic 3084
Tel: (03) 9457 5432

Royal Botanic Gardens
Birdwood Ave
South Yarra Vic 3141
Tel: (03) 9252 2300

Scuba Divers Federation of Victoria
GPO Box 1705P
Melbourne Vic 3000
Tel: (03) 9578 3155

Ski Touring Association of Victoria
GPO Box 20A
Melbourne Vic 3000
Tel: (03) 9457 5432

St John's Ambulance Australia
98 York Street
South Melbourne Vic 3205
Tel: (03) 9696 0550

Victorian Association of Forest Industries (VAFI)
320 Russell Street
Melbourne Vic 3000
Tel: (03) 9662 1444
Fax: (03) 9662 3444

Canoeing Australia
332 Banyule Road
View Bank Vic 3084
Tel: (03) 9459 4251

Victorian Climbing Club Inc.
GPO Box 1725P
Melbourne Vic 3000
Tel: 0419 563 733

Victorian National Parks Assoc. Inc.
10 Parliament Place
East Melbourne Vic 3002
Tel: (03) 9650 8296

Victorian Orienteering Association
332 Banyule Road
View Bank Vic 3084
Tel: (03) 9459 0853

Victorian Outdoor Education Assoc.
150 Palmerston St
Carlton Vic 3053
Tel: (03) 9349 4311
Fax: (03) 9349 5758

Victorian Rafting Association
PO Box 141
Preston Vic 3072
Tel: (03) 9478 3310

Victorian Rogaining Association Inc.
PO Box 30
Collins St West
Melbourne Vic 3000
Tel: (03) 9836 3004

Victorian Sailing & Water Safety School
31 Eastern Beach Road
Geelong Vic 3220
Tel: (03) 5221 8918

Victorian Yachting Council
Suite 2, 77 Beach Road
Sandringham Vic 3191
Tel: (03) 9597 0066